Traditions, Transitions, and Transfats: New Directions for Public Health

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President Barack Obama's recent announcement of Dr. Thomas Frieden as the Director of the Centers for Disease Control and Prevention (CDC) began by pointing out the obvious: "America relies on a strong public health system and the work at the Centers for Disease Control and Prevention is critical to our mission to preserve and protect the health and safety of our citizens." But the President quickly identified those qualities that made Dr. Frieden, who previously served as Commissioner of the New York City Department of Health and Mental Hygiene, stand out: "Dr. Frieden . . . has been at the forefront of the fight against heart disease, cancer, and obesity," as well as infectious disease. The President pointed out that Dr. Frieden is a leader in electronic record-keeping and that he had sought to "reduce the number of smokers by 350,000," battled diabetes, and issued regulations on fast-food restaurants, including calorie labeling.¹ Dr. Frieden had banned smoking in virtually all public places and banned the use of transfats in restaurants throughout New York City.

This introduction of the nation's new CDC director captured the transitions that mark public health today, illuminating the prevention of chronic conditions, environmental hazards, and policy and regulations as important—perhaps paramount—concerns in the 21st century. Dr. Frieden had also established an expectation that all government agencies in New York City were partners in ensuring the population's health. Along with President Obama's other major appointments and nominations, including Kathleen Sebelius at the Department of Health and Human Services, Dr. Margaret Hamburg at the Food and Drug Administration (FDA), Dr. David Michaels at the Occupational Safety and Health Administration, Dr. Gregory Wagner at the Mine Safety and Health Administration, and Dr. Joshua Sharfstein at the FDA, we see a harbinger of the new direction that public health will take in the Obama administration.

While H1N1, bioterrorism, and epidemic infectious diseases will continue to occupy the public health community, the issues that will gain increasing prominence will be those linked to the major chronic conditions resulting from environmental and behavioral risks, the chronic diseases of an aging society, and equity and fairness in the distribution of services. Health reform is focusing

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first on universal access to health-care services and the prevention and containment of epidemic diseases. But in the long run, our public health system must lead on keeping people healthy, both through prevention and more effective management of chronic conditions in the community and in clinical care, and the regulation of the public sphere.

The President's appointments reflect a deep understanding of the epidemiologic transitions that are reshaping the public health field. There have been 13 former directors since the founding of CDC (formally known as the Communicable Disease Center) in 1946. When Dr. Joseph Mountin became the first CDC head in 1946, malaria eradication, polio, rabies, plague, and a host of other infectious conditions led the list of concerns. In 1952, CDC claimed it was ready to combat biological warfare. By the late 1950s and 1960s, it was involved in cholera and smallpox eradication programs throughout the world. By the 1970s, the field recognized the emergence of major new sources of ill health for the population in the form of noncommunicable chronic diseases (e.g., heart disease, stroke, and cancer) and their underlying risk factors (linked to the rapidly changing social, industrial, and cultural environments).

By then, CDC had eliminated "communicable" from its title and morphed into the Center for Disease Control. More recently, with an ever-widening agenda that has expanded to recognize the important role of environmental issues in our health, the "Center" became plural, and the agency evolved into the Centers for Disease Control and Prevention. CDC's expanded mission now prominently includes smoking cessation, prevention of diabetes and its complications, mitigating a host of environmental and occupational toxins, and even gun violence, in addition to protecting the nation from threatening infectious diseases.² This evolution is consistent, historically, with the evolution of the public health community's foci, as the demographic and epidemiologic picture has changed and requires leadership on changing health needs.

Despite the broadening agenda, CDC's pulsing heart—and the popular understanding—has been identification labs and epidemiologic investigations. Dr. Jeffrey Koplan had made giant strides in expanding CDC's agenda, but popular understanding of the new needs has not always kept pace. For example, as recently as this decade, newspapers headlined the appointment of Dr. Julie Gerberding, the last CDC head under the Bush administration, by pointing to her credentials as an infectious disease expert. The media argued that, "To have a director of the CDC whose specialty is infectious diseases is extremely important at this particular point."^{3,4}

While newspapers around the country also noted Dr. Frieden's work as an infectious disease specialist, the emphasis now is clearly different. A *New York Times* article noted, "Dr. Frieden, a 48-year-old infectious disease specialist, has cut a high and sometimes contentious profile in his seven years as New York's top health official." Using words like "crusade" to describe his methodology, the *New York Times* reported, "Dr. Frieden is bound to kick up controversy," because of his willingness "to challenge the status quo."⁵ While the President, in his press release, lauded Dr. Frieden for his willingness to confront smoking, cancer, obesity, and other conditions of modern society, Dr. Frieden acknowledged the President's and the Administration's agenda. "President Obama and Secretary Sebelius recognize the importance of prevention—something CDC does well," he noted. "Both are committed to prevention as a key component of health reform, as evidenced by the Recovery Act, and have highlighted the need for our society to do more to prevent, manage, and treat chronic diseases."⁶

Notably, Dr. Frieden's work in New York City harkens back to a time when public health officials viewed themselves as highly assertive leaders on behalf of creating health—a time in the early 20th century when public health commissioners took it upon themselves to close down dram shops, vaudeville and movie theaters, and even public transportation during epidemics.⁷ His effectiveness in New York during the last seven years came from a potent combination of visionary leadership and goals aligned with those of New York City Mayor Michael Bloomberg. Now, we can expect a more proactive CDC, as Dr. Frieden may very well engage those forces that are at the heart of the new epidemics of diabetes (obesity), lung cancer (tobacco), and other chronic diseases. After all, Dr. Frieden is a strong advocate for government action on behalf of public health, as Dr. Georges C. Benjamin, executive director of the American Public Health Association, has noted.⁸

The obvious relationship between economic and social disparities and disease has guided public health to be involved in issues of social equity, social welfare, economics, environmental regulation, occupational safety, and industrial policy. For many, this breadth of challenges and essential interdisciplinarity in effectively promoting health is what makes public health such an exciting and engaging field, even while predisposing to somewhat amorphous definitions. Charles Edward Amory Winslow, the eminent public health practitioner and bacteriologist, defined public health by identifying the various actors who play a critical role in guarding the public's health. Winslow referred to public health as "the science and art of preventing disease, prolonging

life, and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities, and individuals.”⁹

A quarter-century later, the World Health Organization defined health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”¹⁰ Others, in an attempt to add specificity and more directly speak to the content areas that must be addressed to accomplish optimal health, have provided more specifics—from vaccination, the control of infectious diseases, and child health services through workplace safety, motor vehicle accidents, tobacco control, water fluoridation, risk assessment, disaster preparedness, direct health services, and many others—creating a long list of particular issues. As the public health pyramid continues to grow, adding chronic diseases and the health needs of an aging society, the content boundaries will also expand to meet population needs.

These attempts to define the actors and the boundaries of the field have fed no shortage of (sometimes disparaging) comments. For example, the Institute of Medicine (IOM) devoted an entire chapter of its influential 1988 study, *The Future of Public Health*, to “the disarray of public health.” The IOM argued that the professional community generally lacked “a shared sense of what the citizenry should expect in the way of services” from those in charge of the public’s health. This lack of articulated goals has made it challenging to organize a more effective public health enterprise, which the IOM report also called for, in both its 1988 report and a follow-up report in 2002.^{2,11,12}

While infectious disease will always be a real—and currently an expanding—threat to the public’s health, and our aging population and chronic diseases also make obvious demands, new problems are already challenging us to assert both expertise and leadership. The synthetic world that we have created—a world filled with fast-food restaurants, heat-trapping gases, chronic lead exposure, air and water pollution, unrestrained growth in inhospitable climates, and heavily subsidized pollutants (e.g., tobacco, corn, and the biphenyls and vinyl chloride) in our bottles and landfills—will undoubtedly create new conditions that require public health to be involved in forms of civic, even political, engagement to develop solutions that can only be accomplished at the policy, societal, and even global levels.

REFORMIST ROOTS OF PUBLIC HEALTH

The appointment of Dr. Frieden recognizes that public health will continue to unfold a new era necessary to

address the existing threats to our collective health. Historically, this appointment suggests increased parallels with public health’s reformist and activist roots in 19th- and early 20th-century social reform traditions. In the late 19th and early 20th centuries, public health professionals attained extraordinary improvements in the nation’s health, as measured by increased longevity, lowered infant mortality, the rapid decline of many 19th-century infectious diseases (e.g., cholera, smallpox, yellow fever, and tuberculosis), and improvements in working and housing conditions. At that time, public health officials often shared reformers’ future vision of an efficient, well-organized profession in which public health and the citizenry shared a common goal of a more perfect and equitable society. The field, practitioners believed, would aid the creation of that more perfect society by engaging its expertise in service of the broad social movement.⁷

After the 1920s, public health approaches to disease mitigation changed to working through scientific method, evidence, and a more technocratic lens. The belief that irrational policies and actions would simply succumb to empirical and scientific evidence removed public health from the era’s rough-and-tumble politics and intellectual struggles. This reliance—largely on laboratory-based advances—was reinforced by the obvious successes of mass vaccination campaigns; the development of sulfa drugs, antibiotics, and vaccines; and the role of more systematic surveillance in preparing for epidemics. By the 1950s and 1960s, most public health professionals saw their role as practicing epidemiologists and scientists operating across a range of relevant disciplines—operating in the context of a rational society and a belief in the power of evidence, in itself, to produce needed changes.

This framework concretized an intellectual and social distance between the profession and the population it served. However, there were drawbacks to this distance: it limited the profession’s ability to help the public and politicians remember the importance of public health to all of our health, and constrained joining with popular movements that could give political clout to a field whose activities were all-too-often invisible to most people, but whose dedication to the well-being of the entire society was without question.¹³

RECENT STRUGGLES OVER PUBLIC HEALTH

The 1970s can be seen as a transformational period in public health history. By the 1960s and 1970s, sociologists and the media noted the declining significance of infectious diseases and the growing importance of chronic illness (e.g., heart disease, cancer, and stroke)

as causes of mortality and morbidity.¹⁴ As a result, two major lines of interpretation developed. On the one hand, environmental and consumer organizations such as Public Citizen focused on the importance of environmental and occupational exposures (e.g., asbestos, radiation, and chemical exposures) as the cause of the growing mortality from heart disease and cancer. On the other hand, others saw individual life choices (e.g., smoking, overeating, lack of exercise, and alcohol abuse) as the source of chronic diseases.

These differing interpretations of the epidemiologic transition had distinctly political and ideological meanings, particularly as they played out during the conservative late 1970s, 1980s, and 1990s. If the rise of chronic conditions signaled the conquest of infectious disease, as some surmised, and if antibiotics, vaccines, sulfa drugs, and the like could not address the chronic conditions that now loomed as the next great frontier, then one argument was to focus largely on changing the individual's behavior and identifying personal risk factors to reduce the risks of chronic disease. Some argued that if disease was rooted in an individual's lifestyle, there was little rationale for investing in broad structural and infrastructural public health measures, as such efforts were thought to be ineffective.

Victor Fuchs, a prominent medical economist working out of New York's Mount Sinai Hospital, made one of the earliest arguments for disinvesting in certain types of interventions, particularly high-technology medical interventions. In his 1974 book, *Who Shall Live?*, Fuchs argued that "Current variations in health among individuals and groups are determined largely by genetic factors, environment, and life-style (including diet, smoking, stability of family life, and similar variables)." In other words, they were factors largely unaffected by modern medical treatments. From a population perspective, he argued, medicine was ineffective in changing the overall health experience of chronic diseases caused by lifestyle and personal behavior.^{15,16}

Ivan Illich, writing in 1976, went further when he popularized the term "iatrogenesis" in his book, *Medical Nemesis: The Expropriation of Health*. In the book, Illich argued that doctors and public health professionals, institutions, and even the state represented a serious threat to individual health.¹⁷ With these authors' rejection of the idea that professional interventions are effective, they undermined a core belief of public health: that disease is a biological process emblematic of the social conditions that produce it, and that we have the ability to control our future by affecting the conditions within which people get sick, suffer, and die. Thus, the arguments of the time were conducted at multiple

levels: the targets of intervention (self-responsibility for health behaviors vs. the role of population-level interventions) and the roles of professionals and of technological advances in producing health.

Popular distrust of government, institutions, and professionals has been a powerful force in the American political tradition. But during the 1970s, in the wake of revelations from the Pentagon Papers, Watergate, and attempts to dismantle many of the innovative health programs begun during the 1960s' War on Poverty, such arguments had a heightened resonance for Americans of all political persuasions. Professional authority was undercut, as government itself was held suspect and, at times, public health actions did not help matters. The 1976 influenza vaccination campaign—when two million Americans were inoculated¹⁸ against an epidemic that never materialized—was a troubling moment for public health,¹⁹ as some argued hyperbolically that public health officials "lost virtually all credibility."²⁰

THE NEW POLITICAL ENVIRONMENT AND ITS IMPORTANCE FOR PUBLIC HEALTH

The past 30 years have been challenging for—and of—public health. The public health community, in both science and practice, has faced and met extraordinary challenges from the acquired immunodeficiency syndrome (AIDS) epidemic, tuberculosis, severe acute respiratory syndrome, H1N1, West Nile virus, monkeypox, drug addiction, lead poisoning, obesity, tobacco, alcohol-related illnesses, and many other environmental exposures. Now, with the new administration and the appointments President Obama is making of public officials whose commitments to public service and equity are unquestioned, we have a new opportunity to frame the importance of public health and its necessary role for our future.

The President's appointments and statements mark an extraordinary moment and provide us with guideposts of where public health could go. First, we see recognition that the future of health reform depends on the broad success of disease prevention efforts; prevention responsibilities are indicated to reside both in the clear mandate to CDC—as evidenced by the selection of Dr. Frieden—and in the expectation of the health-care system accomplishing prevention in the clinical arena.

Second, public health leaders such as Dr. Frieden are clearly aware that much of health has to be created through societal and environmental conditions. This goal will require environmental redesign such that, for example, healthy foods are available and affordable

in all neighborhoods, anti-smoking campaigns are enforced, and lead paint is finally removed from the nation's walls so that all of our children remain healthy. Success will require new types of regulation of our food, chemical, mining, and many other industries that directly or indirectly profit from disease, as well as global cooperation.

Third, the President has signaled that "public health" means "population health," and that allowing 47 million people to risk devastation because of a lack of insurance and to have millions of others find out their insurance is inadequate is a moral as well as a societal health failure. Whatever the outcome of the current debate may be in the coming months, there appears to be clarity on our moral and social responsibility to provide universal access.

Finally, the accomplishment of the public's health will require all constituencies to align in support: the professional community of public health as well as medicine, along with the public, businesses, and our elected officials. Rationality, science, and logic—the foundations of public health as a science—are critical but not sufficient for attaining a healthy society; nor is desire alone. What is necessary is for public health to form alliances with consumers and advocacy groups to create a movement that is both evidence- and people-based. This is a time to assert the scientific rationale for public health approaches; the necessity of new, broad interventions to address the health challenges of our time; as well as the principles of equity and justice for our profession.

CONCLUSION

New issues loom on the horizon. For example, the future of public health is wrapped in the "growing challenges, such as the aging of our population and the toxic by-products of a modern economy, transmitted through air, water, soil, or food"¹³ and the responsibility of protecting our people and caring for those made dependent. The new appointments and the new President provide a critical opportunity for the public health community to seize the day. This is a time for concerted and articulate leadership by all sectors of the public health field, in support of CDC's new leader, as well as shaping the agendas the public needs for its future health.

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